



A.D. 1875, 1st MARCH. N^o 742.

Capsules.

LETTERS PATENT to John Henry Johnson, of 47, Lincoln's Inn Fields, in the County of Middlesex, Gentleman, for the Invention of "IMPROVEMENTS IN THE MANUFACTURE OF CAPSULES FOR ENCLOSING MEDICAMENTS AND OTHER SUBSTANCES, AND IN THE APPARATUS EMPLOYED THEREIN."—A communication from abroad by Rudolf Taetz, of Moscow, in the Empire of Russia, Chemist.

Sealed the 13th July 1875, and dated the 1st March 1875.

PROVISIONAL SPECIFICATION left by the said John Henry Johnson at the Office of the Commissioners of Patents, with his Petition, on the 1st March 1875.

I, JOHN HENRY JOHNSON, of 47, Lincoln's Inn Fields, in the County
5 of Middlesex, Gentleman, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN THE MANUFACTURE OF CAPSULES FOR ENCLOSING MEDICAMENTS AND OTHER SUBSTANCES, AND IN THE APPARATUS EMPLOYED THEREIN," a communication to me from abroad by Rudolf Taetz, of Moscow, in the Empire of Russia, Chemist, to be as follows:—

10 This Invention relates to elastic or flexible capsules intended more particularly for containing medicaments, so as to enable the same to

Johnson's Improvements in the Manufacture of Capsules.

be introduced into the stomach without having any action upon the organs of taste, and it consists in forming the capsules of a peculiar composition of substances, and of an improved mode of and apparatus for producing such capsules.

The capsules are composed of a mixture of the following substances 5 in about the under mentioned proportions, viz^t.,—

about 1 part of best gelatine,
 „ 1½ „ chemically pure glycerine,
 „ 2½ „ distilled water.

The before-mentioned substances are melted in a water bath and 10 carefully stirred in order to obtain a liquid of the consistence of syrup, and then clarified.

The moulds may be composed of any suitable material adapted to the liquid they are subsequently intended to receive.

In manufacturing the capsules the operator lays hold of the mould 15 by its handle and dips it into the semi-liquid mass, care been taken by a quick and dexterous turning of the mould to spread the last drop equally over the whole surface in such a manner as to cause the part where the handle is situate to be covered to a somewhat greater thickness than the other portions. 20

In order to effect the removal of the capsules from the moulds (which may take place from ½ to 1 hour after the operation of dipping) the capsule is cut round with a cutting tool close to the handle, the portion of the composition which may remain on the handle is cleaned away, and the capsule now prepared is drawn down from the mould by a quick 25 but uniform rolling, care being taken that the capsule be not completely turned down.

The closing of the filled up capsules is effected with the same composition by the employment for this purpose of a round horn in the form of a ring made, say, for example, of silver wire corresponding with 30 the aperture to be closed. The wired horn is dipped into the semi-liquid, its opening being covered therewith, and then placed upon the capsule, which is in this manner perfectly closed up, care being taken to maintain the semi-liquid mass at a suitable warm temperature.

Johnson's Improvements in the Manufacture of Capsules.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Henry Johnson in the Great Seal Patent Office on the 28th August 1875.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN
5 **HENRY JOHNSON**, of 47, Lincoln's Inn Fields, in the County of Middlesex, Gentleman, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the First day of March, in the year of our Lord One thousand eight hundred and seventy-five, in the 38th
10 year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Henry Johnson, Her special license that I, the said John Henry Johnson, my executors, administrators, and assigns, or such others as I, the said John Henry Johnson, my executors, administrators, or assigns, should at any time agree with, and no others,
15 from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN THE MANUFACTURE OF CAPSULES FOR ENCLOSING MEDICAMENTS AND OTHER SUBSTANCES,**
20 **AND IN THE APPARATUS EMPLOYED THEREIN,**" a communication to me from abroad by Rudolf Taetz, of Moscow, in the Empire of Russia, Chemist, upon the condition (amongst others) that I, the said John Henry Johnson, my executors or administrators, by an instrument in writing under my hand and seal, should particularly describe and
25 ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said John Henry Johnson, do hereby
30 declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, that is to say:—

The said Invention relates to elastic or flexible capsules intended more particularly for containing medicaments, so as to enable the same
35 to be introduced into the stomach without having any action upon the organs of taste, and it consists in forming the capsules of a peculiar

Johnson's Improvements in the Manufacture of Capsules.

composition of substances, and of an improved means of producing such capsules.

The capsules are composed of a mixture of the following substances in about the under mentioned proportion, videlicet,—

about 1	part by weight of best gelatine,	5
„ 1½	„ „ chemically pure glycerine,	
„ 2½	„ „ distilled water.	

The before-mentioned substances are melted in a bath and carefully stirred in order to obtain a semi-liquid of the consistence of syrup, and then clarified. 10

In manufacturing the capsules moulds or formers are employed composed of any material adapted to the same liquid they are subsequently intended to receive, and made of a corresponding shape to the capsules to be produced.

In the operation of making the capsules the operator lays hold of the former by a handle, with which it is provided, and dips it into the semi-liquid mass, whereby such former becomes coated therewith, care being taken by a quick and dexterous turning of the former to spread the last drop equally over the whole surface in such a manner as to cause the part where the handle is situate to be covered to a somewhat greater thickness than the other portions. 15 20

In order to effect the removal of the capsules from the “formers” (which operation may take place after the lapse of, say, from half to one hour from the time of the operation of dipping) the capsule is cut round with a cutting tool close to the handle, the portion of the composition which may remain on the handle is cleaned away, and the capsule now prepared is drawn down from off the “former” by a quick but uniform rolling motion. 25

The capsule is then to be filled, after which the closing of the filled up capsules is effected with the same composition by the employment for this purpose of a round horn or socket, having a ring, made, say, for example, of silver wire corresponding with the aperture to be closed. The wired horn or socket is dipped into the semi-liquid, its opening being covered therewith, and then placed upon the capsule, so as to enclose the open end of the same, which is in this manner 30 35

Johnson's Improvements in the Manufacture of Capsules.

perfectly closed up, the horn or socket being subsequently removed ready for closing a fresh capsule. Care is to be taken to maintain the semi-liquid mass at a suitable warm temperature.

Having now described and particularly ascertained the nature of the
5 said Invention, and the manner in which the same is or may be used
or carried into effect, I would observe in conclusion that what I consider
to be novel and original, and therefore claim as the Invention secured
to me by the herein-before in part recited Letters Patent is,—

First. The employment for the production of capsules of the compo-
10 sition herein-before described.

Second. The manufacture of capsules substantially in the manner and
by the means herein-before described.

In witness whereof, I, the said John Henry Johnson, have to this
my Specification set my hand and seal, the Twenty-eighth day
15 of August, One thousand eight hundred and seventy-five.

J. HENRY JOHNSON. (L.S.)

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1875.

